

Notice of Allowability

Application No.

09/993,350

Examiner

KIEU-OANH T BUI

Applicant(s)

MCKENNA, THOMAS P.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-50.
3. ☒ The drawings filed on 14 November 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 1&2
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Kory Christensen on 09/20/2004.

The application has been amended as follows:

2. Please amend the specification as the following:

On page 34, please replace the paragraph beginning at line 7 with the following amended paragraph:

--In the depicted embodiment, the references 506p store the PIO IDs 506q. The PIO IDs 506q identify the entertainment device STB 102a-b in which the PIO 502a-b is stored. For example, within PIO 502a, the reference 506p is "STB b." The linked PIO 502b includes a PIO ID 506q which is equal to the reference 506p "STB b" indicating that the link 1602 is to a PIO 502b stored on "STB a[[b]]." Similarly, PIO 502b stores a reference 506p for the return link 1602 to PIO 502a. In addition, the PIO IDs 506q may include a memory address within the referenced STBs 102.--

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1. (currently amended) A method for providing access to television programs and related information, the method comprising:

storing ~~at least two~~ program interface objects (PIOs) within ~~[[an]]~~ at least two set top boxes ~~entertainment system~~, each PIO comprising a plurality of attributes carrying information about a television program, a plurality of user-selectable actions performable by the set top boxes ~~entertainment system~~ in connection with the television program, and at least one visual indicator displayable in a graphical user interface (GUI) to facilitate user interaction with the PIO;

linking the stored ~~at least two~~ PIOs, such that an operation performed in connection with one PIO in one set top box may also be performed in connection with the other PIO in each of the other set top boxes.

2. (Currently amended) The method of claim 1, further comprising:

receiving a user selection of a stored PIO for transmission to another set top box ~~entertainment system~~;

transmitting the selected PIO to the other set top box ~~entertainment system~~; and

transmitting a PIO linked to the selected PIO to the other set top box ~~entertainment system~~.

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3. (original) The method of claim 1, further comprising:
 - receiving a user selection of an action associated with a stored PIO;
 - executing the selected action in connection with the stored PIO; and
 - executing the selected action in connection with a PIO linked to the stored PIO.

4. (Currently amended) The method of claim 1, further comprising:
 - receiving a user selection of a stored PIO;
 - determining whether a PIO linked to the selected PIO is stored in the set top box ~~entertainment system~~;
 - in response to a linked PIO not being stored in the set top box ~~entertainment system~~, retrieving the linked PIO; and
 - storing the retrieved PIO in the set top box ~~entertainment system~~.

5. (original) The method of claim 4, wherein retrieving comprises:
 - establishing a network connection with a PIO server storing the linked PIO;
 - receiving the linked PIO via the network connection.

6. (original) The method of claim 1, further comprising:
 - modifying a visual indicator of a PIO to provide a visual cue to a user that the PIO is linked to another PIO.

7. (original) The method of claim 1, wherein linking comprises:
storing within a first PIO a reference to a second PIO.
8. (original) The method of claim 7, wherein linking further comprises:
storing within the second PIO a reference to the first PIO.
9. (original) The method of claim 7, wherein the reference is an attribute of the first PIO.
10. (original) The method of claim 7, wherein the reference comprises a Uniform Resource Locator (URL).
11. (original) The method of claim 7, wherein the reference comprises a file name.
12. (original) The method of claim 7, wherein the reference comprises a memory location.
13. (original) The method of claim 7, further comprising:
determining that a second PIO linked to a first PIO has been moved to a new
location; and
updating the reference in the first PIO to reference the new location of the second
PIO.
14. (original) The method of claim 7, further comprising:
determining that a second PIO linked to a first PIO has been deleted; and
removing the reference in the first PIO referring to the second PIO.

15. (original) The method of claim 1, wherein at least one PIO is linked to at least two different PIOs.
16. (original) The method of claim 1, wherein the at least two PIOs are linked according to a ring configuration.
17. (original) The method of claim 1, wherein the at least two PIOs are linked according to a chain configuration.
18. (original) The method of claim 1, wherein at least four PIOs are linked according to a star configuration.
19. (currently amended) The method of claim 1, wherein a first PIO is linked to a second PIO, the second PIO being stored within a different set top box ~~entertainment system~~.
20. (original) The method of claim 1, wherein the at least two PIOs are linked according to genre.
21. (original) The method of claim 1, wherein the at least two PIOs are linked according to a rating for the associated television programs.
22. (original) The method of claim 1, wherein the at least two PIOs are linked according to user-defined criteria.
23. (original) The method of claim 1, wherein the at least two linked PIOs correspond to television programs that have been previously recorded.

24. (original) The method of claim 1, wherein the PIO is selected from the group consisting of a JavaBean object, a Distributed Component Object Model (DCOM) object, and an eXtensible Markup Language (XML) object.

25. (currently amended) The method of claim 1, wherein the set top box ~~entertainment system~~ comprises an interactive television (ITV) system.

26. (currently amended) A system for providing access to television programs and related information, the system comprising:

at least two set top boxes, each set top box including:

a computer-readable medium that stores ~~at least two~~ a program interface object[[s]] (PIO[[s]]), each PIO comprising a plurality of attributes carrying information about a television program, a plurality of user-selectable actions performable by an entertainment system in connection with the television program, and at least one visual indicator displayable in a graphical user interface (GUI) to facilitate user interaction with the PIO; and

a linking component that links the ~~at least two~~ PIOs with a PIO in another set top box, such that an operation performed in connection with one PIO may also be performed in connection with the other PIO.

27. (currently amended) The system of claim 26, wherein each set top box further comprises[[ing]]:

a selection component that receives a user selection of a stored PIO for
transmission to another set top box entertainment system; and
a transmission component that transmits the selected PIO and a PIO linked to the
selected PIO to the other set top box entertainment system.

28. (currently amended) The system of claim 26, wherein each set top box further
comprises~~es~~[[ing]]:

a selection component that receives a user selection an action associated with a
stored PIO; and
an action component that executes the selected action in connection with the
stored PIO and in connection with a PIO linked to the stored PIO.

29. (currently amended) The system of claim 26, wherein each set top box further
comprises~~es~~[[ing]]:

§ a selection component that receives a user selection of a stored PIO; and
a communication component that, in response to determining that a PIO linked to
the selected PIO is not stored in the set top box entertainment system,
retrieves and stores the linked PIO in a storage device of the set top box
entertainment system.

30. (original) The system of claim 29, wherein the communication component establishes a
network connection with a PIO server storing the linked PIO and receives the linked PIO via the
network connection.

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31. (original) The system of claim 26, wherein the linking component is configured to modify a visual indicator of a linked PIO to provide a visual cue to a user that the PIO is linked to another PIO.

32. (original) The system of claim 26, wherein the linking component stores within a first PIO a reference to a second PIO.

33. (original) The system of claim 32, wherein the linking component stores within the second PIO a reference to the first PIO.

34. (original) The system of claim 32, wherein the reference is an attribute of the first PIO.

35. (original) The system of claim 32, wherein the reference comprises a Uniform Resource Locator (URL).

36. (original) The system of claim 32, wherein the reference comprises a file name.

37. (original) The system of claim 32, wherein the reference comprises a memory location.

38. (original) The system of claim 32, wherein the linking component, in response to a determination that a second PIO linked to a first PIO has been moved to a new location, updates the reference in the first PIO to reference the new location of the second PIO.

39. (original) The system of claim 32, wherein the linking component, in response to a determination that a second PIO linked to a first PIO has been deleted, removes the reference in the first PIO referring to the second PIO.

40. (original) The system of claim 26, wherein at least one PIO is linked to at least two different PIOs.

41. (original) The system of claim 26, wherein the at least two PIOs are linked according to a ring configuration.

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42. (original) The system of claim 26, wherein the at least two PIOs are linked according to a chain configuration.

43. (original) The system of claim 26, wherein at least four PIOs are linked according to a star configuration.

44. (currently amended) The system of claim 26, wherein a first PIO is linked to a second PIO, the second PIO being stored within a different set top box ~~entertainment system~~.

45. (original) The system of claim 26, wherein the at least two PIOs are linked according to genre.

46. (original) The system of claim 26, wherein the at least two PIOs are linked according to a rating for the associated television programs.

47. (original) The system of claim 26, wherein the at least two PIOs are linked according to user-defined criteria.

48. (original) The system of claim 26, wherein the at least two linked PIOs correspond to television programs that have been previously recorded.

49. (original) The system of claim 26, wherein the PIO is selected from the group consisting of a JavaBean object, a Distributed Component Object Model (DCOM) object, and an eXtensible Markup Language (XML) object.

50. (currently amended) The system of claim 26, wherein the set top box ~~entertainment system~~ comprises an interactive television (ITV) system.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-50 are allowed.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The closest prior arts issued to Hoyle (US Patent 6,771,290 B1) and to Volk et al (US Patent 5,673,401) fails to either alone or combine to teach or suggest a system for providing access to television programs and related information and its corresponding method, wherein program interface objects (PIOs) are stored within at least two set top boxes in a television system, and EACH PIO comprising a plurality of information attributes about a television program, user selectable actions related with the television program and at least one visual indicator displaying within the IPO on a graphical user interface; moreover, an operation is performed in connection with one IPO in one set top box can also be performed in connection with the other IPO in each of the other set top boxes based on the link of the stored PIOs (as best illustrated in Figure 18 of the present invention) as cited in claims 1 and 26.

Hoyle discloses a system and method that the user can access and real-time targeting advertisements to the user within a network that the user is located at different locations using Java, XML program components for client computers-including set top boxes (Hoyle, col. 4/lines 1-58; col. 16/lines 31-55), and whereas the program components can be linked using URLs (as shown in Fig. 7); however, Hoyle is clearly silent on the direct linking of program interface objects between at least two set top boxes. In a similar manner, Volk also discloses an interactive television program system, wherein the headend provides through a connection

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network that set top terminals can interactively engage in interactive sessions with the headend, using the linking of program objects and control objects (Volk, Figs. 1, 3, 8, and col. 5/lines 7-40). Volk is also clearly silent on the direct linking of program interface objects, wherein the PIOs further comprising attributes, user actions and icons (as noted above), between at least two set top boxes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krista Kieu-Oanh Bui whose telephone number is (703) 305-0095. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:30 PM, with alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant, can be reached on (703) 305-4755.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read "K. Bui", with a long horizontal flourish extending to the right.

Krista Bui
Art Unit 2611
September 22, 2004

KRISTA BUI
PATENT EXAMINER